NEW YORK STATE OF OPPORTUNITY | Department of Agriculture and Markets

NYS Farmland Protection Working Group (FPWG)

Wednesday, December 16, 2022
12:00 to 2:00 PM EST

Kathy Hochul
Governor

Richard A. Ball
Commissioner

Housekeeping Considerations

- ✓ This remote meeting is open to the public and viewing access has been made accessible via WebEx.
- ✓ The meeting will be recorded and posted for future viewing
- ✓ Principle members and presenters will not be muted during the discussion. Please mute your own lines when not speaking.
- ✓ If members would like to speak on a subject, please use the raise hand function. We will also be monitoring the chat box.

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Agenda

- Meeting Check In
- Opening Remarks
- FPWG Preliminary Strategies Report - Recap
- Agency /Authority Updates
- Research Related Preliminary Strategies Prioritization
- Open Discussion –Supplemental Strategy Topic Discussion
- Wrap Up & Next Steps
- Adjourn

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Welcome from Commissioner Ball

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FPWG Preliminary Strategies - Recap

New York State
Farmland Protection Working Group
2022 Interim Report

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Overview

- Outputs
  - New York State Farmland Protection Working Group 2022 Interim Report
    - https://agriculture.ny.gov/system/files/documents/2022/05/interimreport_farmlandprotectionworkinggroup_05.23.2022.pdf

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Overview

- Contents
  - Terminology
  - NYS Climate Policies and Agricultural Considerations
  - Preliminary Strategy Summary
  - Supplements

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Preliminary Strategies

➢ Studies, Applied Research, and Demonstrations

- Document case studies of agricultural activities within solar energy facilities (e.g., dual-use/co-utilization) from other states and countries.

➢ Financial Incentives/Disincentives

- Incentivize developers and landowners to continue to utilize land for farming within the project site, co-existing with solar projects.

➢ Local/State Planning Implementation

- Update local farmland protection plans to reflect siting of renewable energy facilities.

➢ State and Local Government Tools

- Add the latest version (2022) of the Mineral Soil Group (MSG) 1-4 tabular data and geographic information system layers to OpenNY to promote dissemination.

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Overview

- Comments

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NYSERDA Preliminary Strategies Update

FPWG Meeting

December 16, 2022

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NYSERDA Agenda Items

> NYSERDA Agricultural Strategies Updates
- State and Local Government Tools
  - **Large-Scale Renewable Program and Smart Solar Siting Scorecard**
  - Solar Model Law, Ag Chapter to Guidebook, Local Government Services
  - NYSERDA 2022 Soils Data Update
- Potential Financial Incentives/Disincentives
  - Agricultural Mitigation & Deferral Option to encourage Co-utilization

> Research Prioritization
- Co-utilization
- Cumulative Impacts Study
- Ecosystem Services and Ecological Impacts

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Renewable Energy Standard (RES): Evolution of Agricultural Evaluation Criteria (Tier 1)

> **2016** – NYSERDA awarded its first Large-Scale Solar project under the last procurement in the Renewable Portfolio standard

> **2017** – Renewable Energy Standard procurements started under the Clean Energy Standard, resulting in 22 solar, 1 hydroelectric and 3 wind awards. This was the first year that evaluated bids in part based on their project viability, including their permitting status, preferencing projects with more developed site plans

> **2018** – NYSERDA introduced **Site Character** evaluation criteria which favorably evaluated projects that avoided United States Department of Agriculture (USDA) Prime Soils and Prime Soils if drained

> **2019** – NYSERDA introduced and required awarded projects claiming Site Character points or projects sited in Agricultural Districts to **adhere to AGM's 'Guidelines for Solar Projects** - Construction Mitigation for Agricultural Lands'

> **2020** – NYSERDA signaled to renewable developers to **avoid Mineral Soil Groups 1-4** by requiring an **agricultural mitigation payment** for projects sited on 30 acres of more of MSGs 1-4

> **2021** – **Smart Solar Siting Scorecard** ("Scorecard") introduced

> **2022** – **Updated Scorecard** and to be used in evaluation; **Agricultural Mitigation Payment Deferral** mechanism implemented to encourage agricultural co-utilization

Requirements for Projects Awarded in Agricultural Districts

Solar Construction Mitigation Guidelines:

> All projects are required to comply with the NYS Dept. of Ag. and Markets (AGM) Guidelines for constructing on agricultural lands; inclusive of post-construction restoration monitoring, decommissioning

Notice of Intent Process:

> For all projects in NYS Agricultural Districts not subject to permitting through Office of Renewable Energy Siting, NYSERDA works with the project developer to submit a Notice of Intent to AGM for their review and to solicit any recommended modifications to the project design (applicable to SEQR permitted projects)

Agricultural Mitigation Fund:

> Any project within an Agricultural District awarded a NYSERDA contract after 2019 that is also constructed on more than 30 acres of Mineral Soil Groups (MSG) 1-4 is required to pay an Agricultural Mitigation Fee based on the total project area on MSG 1-4. Fee can potentially be deferred if project implements an acceptable agricultural co-utilization plan

Potential State and Local Government Tools

2) Create a plan to pre-screen sites for presence of natural resources.

A. Utilize Smart Solar Siting Scorecard for NYSERDA's annual Renewable Energy Certificate (RECs) solicitations.

Update: RESRFP22-1 incorporates the upgraded 2022 Smart Solar Siting Scorecard, vastly improved via feedback received from the deliberations of the Agricultural Technical Working Group.

Link to the 2022 Scorecard:
RESRFP22-1 Smart Solar Siting Scorecard

Smart Solar Siting Scorecard: Background and Purpose

An LSR tool for solar projects that can be used to:

> Consistent and uniform measure of how well a project avoids certain environmental and agricultural resources.

> Provide strategies that may be implemented to minimize impacts on resources that cannot be avoided.

> Allow a mechanism to preferentially evaluate proposals based on how well they avoid certain resources and/or elect to include agricultural co-utilization commitments, among other criteria.

The tool will assist:

> Developers, in prospectively siting and designing a solar project to minimize impacts and provide co-utilization benefits to the State's resources.

> NYSERDA, in project evaluation and selection, allowing for objective comparison of projects and provide a methodology to differentiate comparable projects based on their avoidance/ minimization/ mitigation commitments.

Smart Solar Siting Scorecard:
Agriculture Avoidance, Minimization & Collaboration

Scorecard Framework:

Scorecard Section	Points Available		Total
	Avoidance	Minimization	
Agricultural Protection	50	45	95
Environmental Protection	0 – 30	5 – 10	35
Community Benefits & Collaboration	25		25
Innovation	5		5
	Total Points Available		**160**

Avoidance

Based on avoidance of prioritized resources: Mineral Soil Groups (MSG) 1-4, active agricultural production, and forested lands.

Minimization & Collaboration

Based on mandatory and elective strategies related to site design, construction practices, soil conservation, operations and maintenance/ monitoring, community benefits and engagement, and co-utilization commitments.

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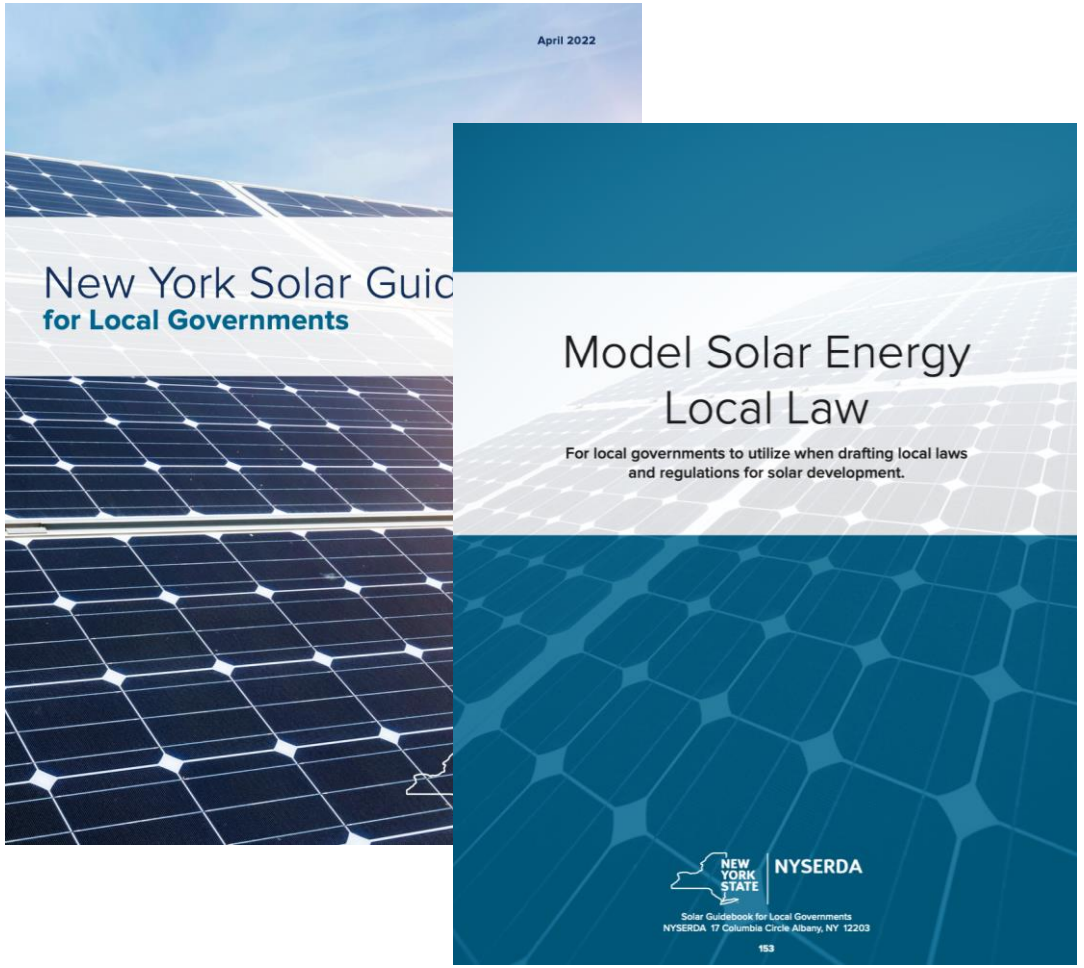
State and Local Government Tools

Updated NYSERDA's model solar energy local law to enhance treatment of agricultural issues.

- Continue to administer countywide workshops on the model solar law to educate local officials on available resources and provide best practice guidance.
- Provide direct technical assistance to municipalities as they adopt local laws to encourage responsible development while maintaining active and productive agricultural lands.
- Subject-matter experts: Planning and Zoning, Land Use and Engineering Review, Code Enforcement, Energy Storage and Fire Safety, and Clean Energy Project Economics

NYSERDA Model Solar Energy Law

- Zoning Districts
- Underground Requirements
- Vehicular Paths
- Signage
- Glare
- Lighting
- Multiple lots
- Lot size
- Setbacks
- Height
- Lot coverage
- Fencing Requirements
- Screening and visibility
- Environmental Resources
- **Agricultural Resources**



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Agricultural Resource Protection in NYSERDA Model Law

1) Protect Mineral Soil Groups 1-4. Municipalities may customize to address their unique concerns.

2) Follow the construction requirements of the New York State Department of Agriculture and Markets, including post-construction restoration monitoring and decommissioning.

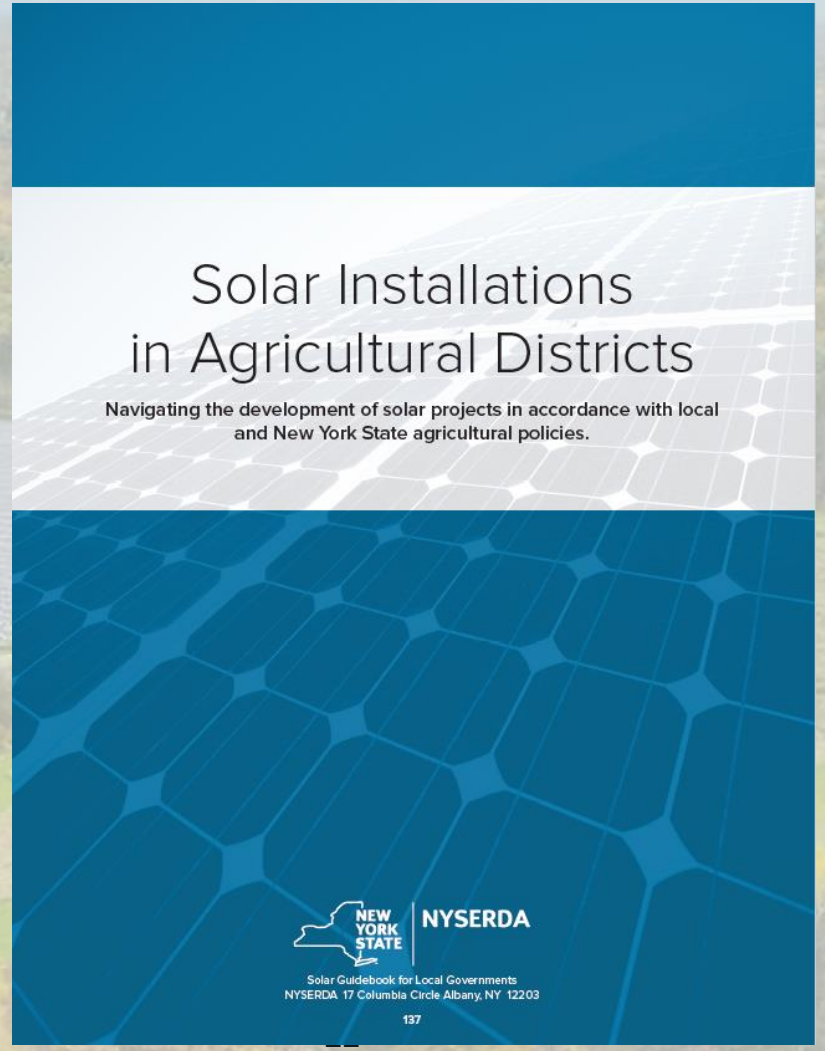
3) Provide native perennial vegetation and foraging habitat beneficial to game birds, songbirds, and pollinators.

NYSERDA Model Solar Law: Recent Updates

- Added content to the Model Law chapter to instruct municipalities on how to approach zoning for solar, and to introduce alternative zoning approaches (overlays/floating zones, incentive zoning, etc.).
- Added a Tier 4 (distinguish between distributed solar & large-scale solar).
- Reformatted/reorganized to distinguish between special use permit standards vs. site plan approval requirements.
- Aligned with standards/language in place by other State Agencies (MSG 1-4).
- Created a more robust decommissioning plan template.
- Added standards for solar impacting agriculture.

NYSERDA's Solar Guidebook: Solar + Ag Chapter

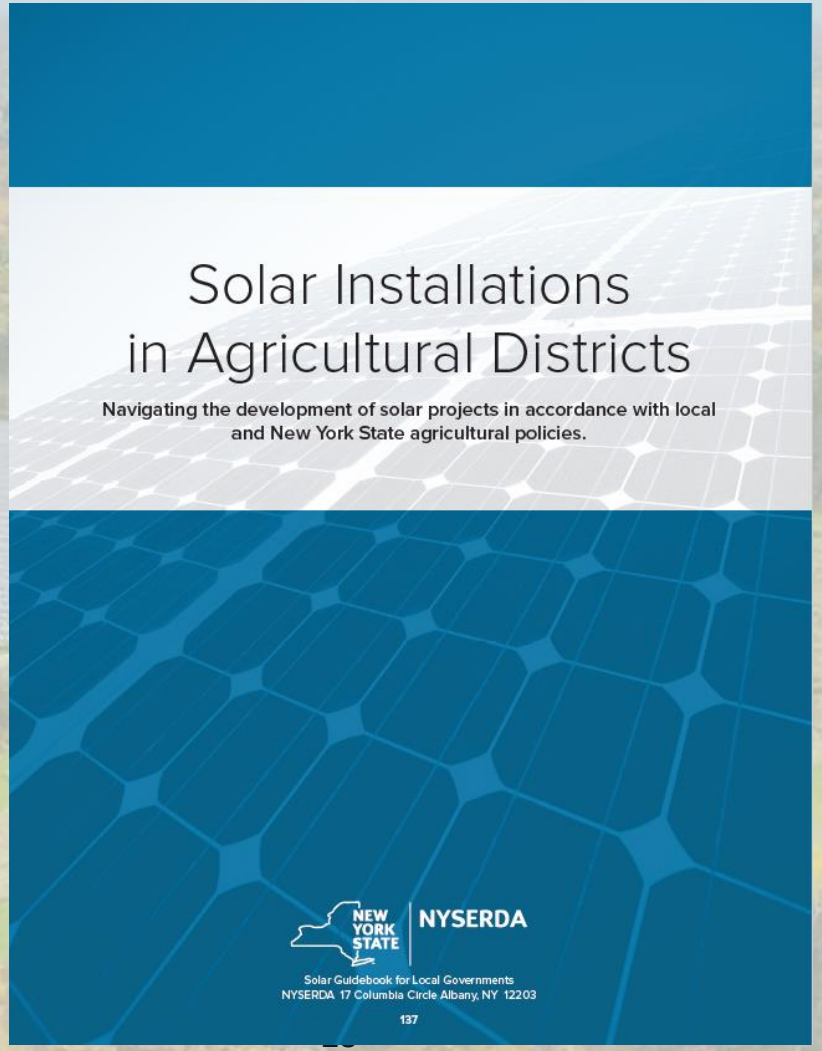
Current Chapter Contents



Coming soon: Updated Solar + Ag Chapter

DRAFT New Chapter Contents

Solar Installations on Agricultural Lands



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  - Potential Financial Incentives/Disincentives
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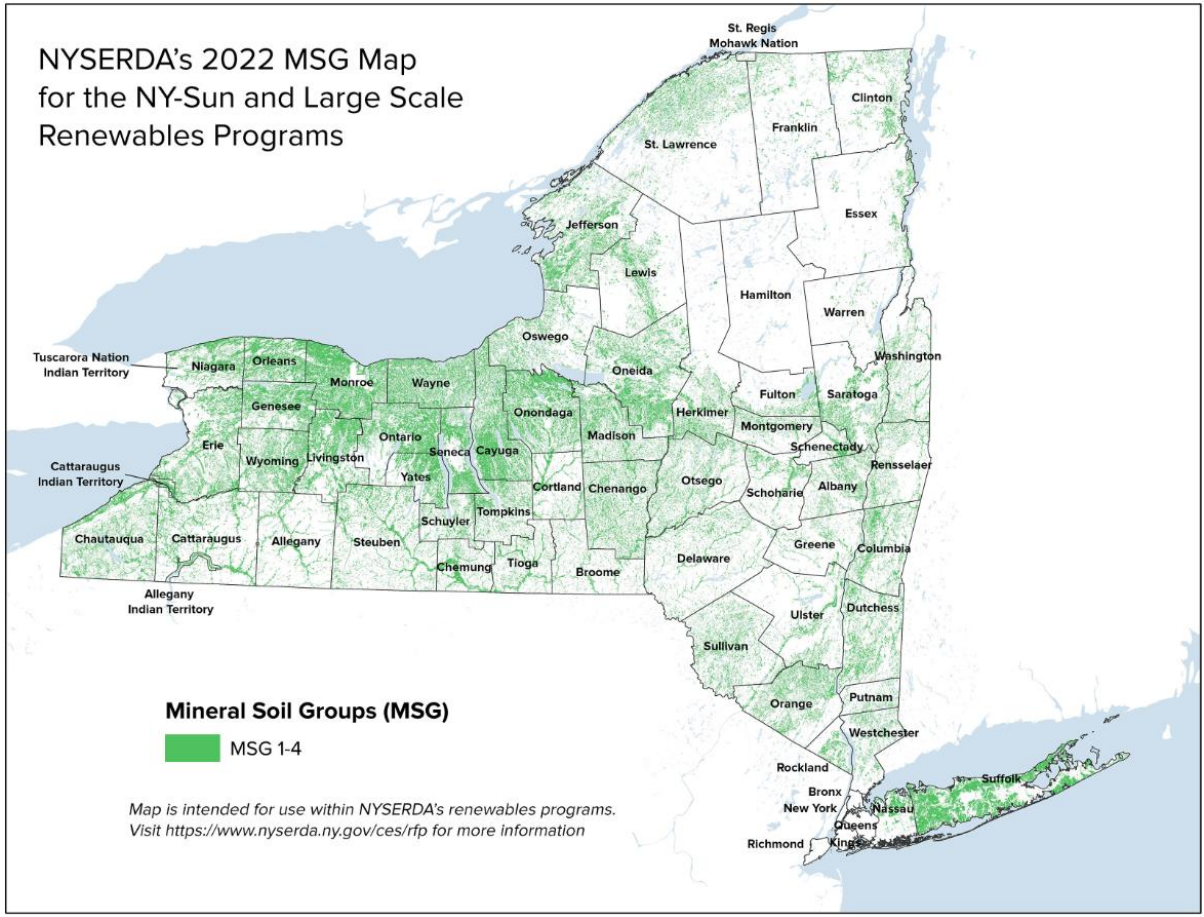
NYS' Agricultural Land Classification System: Mineral Soil Groups

- NYSERDA published its 2022 Soils Data July 6, 2022. As of early December, it has been viewed over 1,000 times and downloaded nearly 150 times.
- NYSERDA 2022 Soils Data is available on NYSERDA's Large Scale Renewables website.
- Direct link: https://data.ny.gov/Energy-Environment/NYSERDA-2022-Soils-Data-for-use-in-the-Large-Scale/s9wp-hu53



NYS' Agricultural Land Classification System: Mineral Soil Groups

Farmland Class	Mineral Soil Group Value (*source: NYSERDA 2022 Soils Data*)									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
All areas are prime farmland	94%				6%	0.2%	0.2%	0.1%	0.0%	0.0%
Farmland of statewide importance	0.0%	0.1%	2%	94%				3%	0.0%	0.0%
Not prime farmland	0.0%	0.0%	0.0%	0.1%	1.7%	97%				0.9%
Prime farmland if drained	0.0%	0.3%	0.1%	98%			1.9%	0.0%	0.1%	0.0%

MSG dataset link:
https://data.ny.gov/Energy-Environment/NYSERDA-2022-Soils-Data-for-use-in-the-Large-Scale/s9wp-hu53

Mineral Soil Groups Continued

MSG dataset link:
https://data.ny.gov/Energy-Environment/NYSERDA-2022-Soils-Data-for-use-in-the-Large-Scale/s9wp-hu53

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Potential Financial Incentives/Disincentives

1) Incentivize developers and landowners to continue to utilize land for farming within the project site, co-existing with solar projects.

A. Establish agriculturally friendly siting practices for agricultural operators and solar developers to encourage dual-use/co-utilization (forage, row crops, pasture, etc.).
B. Allow continued agricultural assessment on acres utilized with the goal of minimizing impacts to agricultural production through dual-use, multi-use, and co-utilization, to encourage farming inside the project fence and on adjacent lands.

Update: NYSERDA, in consultation with AGM, has developed the Agricultural Mitigation Payment Deferral option to encourage Large-Scale solar projects to consider implementing agricultural co-utilization within the project's facility area.

2) Explore options to disburse Agricultural Mitigation Payments to assist local efforts.

A. Share payments with impacted counties to advance farmland protection plan action items.
B. Secure perpetual conservation easements on farms targeting prime agricultural lands in disproportionately impacted communities.
C. Distribute payments to the Soil and Water Conservation Districts associated with a project's host county or counties and prioritize funding for soil conservation projects on farms to protect lands of agricultural importance to New York State.

Update: Chapter 652 of the Laws of 2022 was recently enacted to direct how these funds to AGM for the farmland viability protection fund. NYSERDA will work with AGM to implement this bill for contracts issued on or after February 21, 2023.

Agricultural Mitigation Fund and Deferral Option:

Mitigation Fund Payments are assessed based on a formula relating to how much of the final solar project footprint overlaps with land classified as MSGs 1-4:

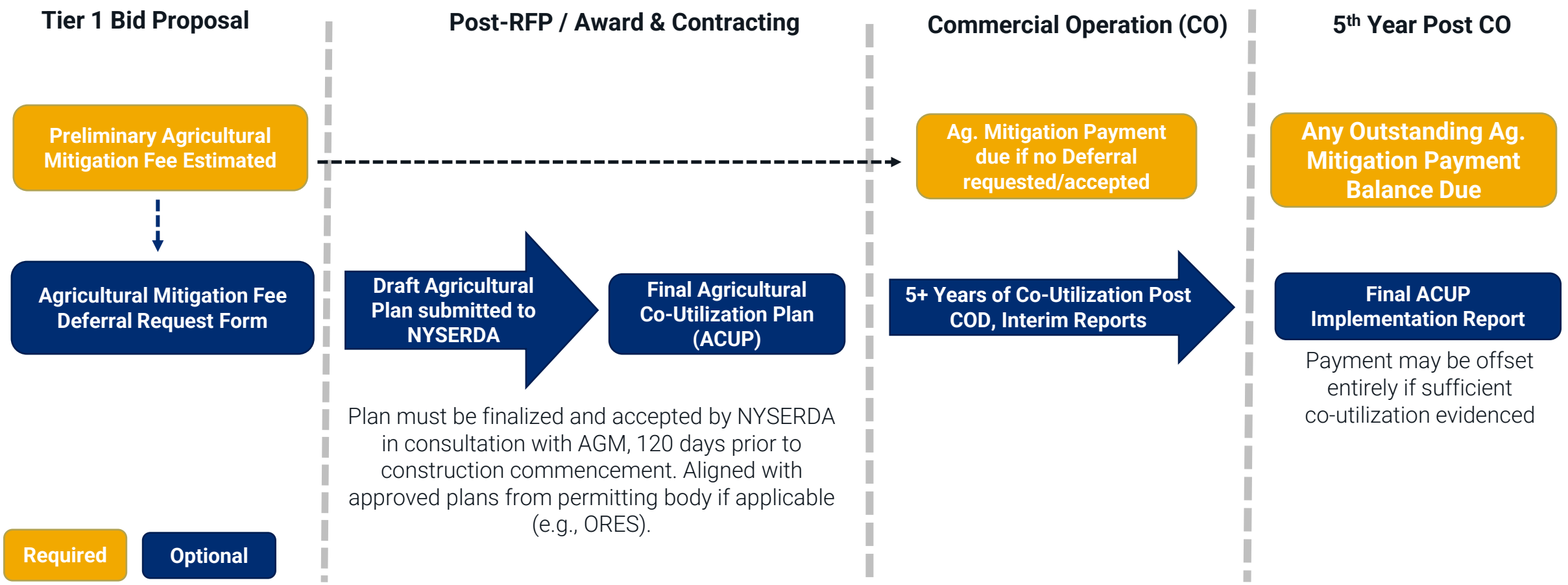
> Applicable when the total acreage of a Facility Area exceeds 30 acres of MSGs 1-4

> Mitigation Fund Payments are a one-time fee due within 60 days after Commercial Operation is achieved

> **Payment may be deferred for five years and fully or partially reduced based on the Eligible Co-Agricultural Expenses by submitting an acceptable agricultural co-utilization plan (ACUP)**

Details on the calculation of the agricultural mitigation payment can be found in Appendix 2 of the RESRFP22-1; https://www.nyserda.ny.gov/all-programs/clean-energy-standard/renewable-generators-and-developers/res-tier-one-eligibility/solicitations-for-long-term-contracts

Agricultural Mitigation Payment and Deferral Request Flow Chart



Questions?

Bram Peterson, Program Manager, Large-Scale Renewables

Candace Rossi, Senior Project Manager, NY-SUN

Jen Manierre, Program Manager, Clean Siting Team

Jeremy Wyble, Senior Project Manager, Large-Scale Renewables

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NYS Department of Agriculture and Markets
Agriculture Protection Unit's Internal Solar Tracking Update

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PSL Article 10 & Executive Law 94-c

- 20 projects certified or on tract to be permitted.
- 2,569.5 MW averaging facility sites 127-MW projects.
- Project propose utilization of 5,807 acres of MSG 1-4; or an 36% of the typical facility area.
- Average facility foot-print is 877-acres.
- Statistics do not account for Net Conservation Benefit mitigation which typically increases agricultural conversions.

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Agriculture Districts Notice of Intent

- 400 projects reviewed since 2019, including 45 NY counties.
- Orange, Oneida and St. Lawrence counties have the highest level of activity to ADs. Each county representing 6% each (131 MW - 114.5MW) of the total MW.
- Projects total 2,056 MW, averaging facility sites 5-MW projects.
- Combined Facility Areas total
  - 11,462 Ag District acres.
  - 4,149 acres of MSG 1-4.
- Average facility area is 29-acres, comprising of 36% MSG 1-4.
- Average Impacts to MSG 1-4 per year
  - 2019 – 267 MW - Average 28%
  - 2020 – 814 MW - Average 35%
  - 2021 – 478 MW - Average 44%
  - 2022 – 479 MW - Average 34%

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Research Related Preliminary Strategies Prioritization

FPWG Meeting

December 16, 2022

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FPWG: Potential Studies, Applied Research, and Demonstrations on Utility-Scale Projects

FPWG Interim Recommendation #1: **Facilitate further research related to dual-use or co-utilization of agricultural production and utility-scale renewable energy projects (20 megawatts alternating current and larger).**

A. Document case studies of agricultural activities within solar energy facilities (e.g., dual-use/co-utilization) from other states and countries.

B. Foster the development of standards and best management practices for agricultural dual-use/co-utilization (forage, row crops, pasture, etc.).

C. Direct funding to applied research located on/adjacent to utility-scale and distribution level demonstration projects incorporating dual-use/co-utilization. Select/encourage a pilot project or projects to minimize agricultural impacts.

Update: Chapter 629 of the Laws of 2022 was recently enacted to direct the Department of Agriculture and Markets, in cooperation with NYSERDA, to develop and produce guidance and educational materials on the use of agrivoltaics in farming to promote the benefits to farmers of the co-location of solar power systems on active farmland for crop production, reduced energy costs, and climate resilience.

Current NYS supported Agri-PV Related Research

NYSERDA's PON 4270 (4 of 6 research projects awarded)

1. *Agro-economic and Environmental Impacts of Co-location of Solar and Agriculture (Research Lead: American Solar Grazing Association)*
2. *Land-use Optimization of Energy and Agricultural Productions for Low-impact PV Site Designs (Research Lead: Cornell University)*
3. *Avian Use of PV Solar Energy Facilities in New York – Biodiversity, Community Composition, and Conservation Significance (Research Lead: DNV)*
4. *Utility-Scale Solar Effects on Wetland Hydrology, Winter Raptor, and Grassland Bird Threatened and Endangered (T&E) Species and Decommissioning Best Management Practices and Mitigation Opportunities (Research Lead: Tetra Tech, Inc.)*

NYPA Awarded $102,000 by APPA to Study Sustainable Land Practices Integrating Co-Located Agricultural Land and Solar Power Generation:

Funding through the DEED grant will empower NYPA, in collaboration with the Electric Power Research Institute (EPRI), to encourage the establishment of best practices that will enable farmers, communities, developers, industry partners, equipment vendors, utilities and other stakeholders to better understand the benefits of sustainable land use practices and co-location of agriculture with solar generation.

FPWG: Potential Studies, Applied Research, and Demonstrations on Utility-Scale Projects

FPWG Interim Recommendation #2: **Initiate a study, building on the information contained within the September 2020 CLCPA Final SGEIS and related environmental reviews, to determine the potential benefits and/or burdens of renewable energy development related to New York's agricultural industry.** **Assess the impact of solar project proliferation and the associated economic and productivity impact on the agricultural sector. The study will include an inclusive assessment of all economic pressures, non-solar land-use conversions, and other factors impacting New York's agricultural economy and land use. The study will be used to inform State and regional policy, balancing State agricultural priorities with the statutory requirements of the CLCPA.**

Potential Study Design (Proposed)

A study design to assess the benefits and burdens of solar development:

1. Solar Farms Costs and Benefits (Literature Review and Data Analysis)

- A review of public-facing literature to compile a compendium and summary on the most relevant findings.
- Analyze non-public economic information (in an appropriate manner) to better understand the direct economic impacts of solar projects (e.g., land lease data, estimated PILOT/HCA data, etc.)

2. Land Use Change Analysis (Desktop GIS/Spatial Analysis)

- Analyze historical and prospective land use changes resulting from solar and non-solar development.
- Incorporate geospatial overlays such as transmission lines.

3. Agricultural Economic Analysis (if needed)

- Are there areas of potential acute agricultural impacts from concentrated solar development?
- Evaluate desktop or field study options to understand potential effects on regional agricultural economic activity.

FPWG: Potential Studies, Applied Research, and Demonstrations on Utility-Scale Projects

FPWG Interim Recommendation #3: Encourage environmental, habitat, and ecosystem services studies of operating solar projects, with a focus on grassland bird and threatened and endangered species benefits and impacts.

A. Study habitat conservation benefits in a project's operating period/expected useful life within existing solar arrays (inside the fence). Aggregate existing studies (or requirements for studies to be conducted) and post-construction monitoring efforts for meta-analysis.

B. Encourage pilot projects to evaluate the efficacy of establishing habitat and siting features (e.g., wildlife migration corridors, nesting boxes) for threatened and endangered species within and in proximity to solar arrays that will improve the habitat.

Update: PON 4270 awarded two ongoing research projects which incorporate research to support study these areas. Results are anticipated in 2024.

Questions?

Jeremy Magliaro, Program Manager, Environmental Research

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Open Discussion – Supplemental Strategy Topic Development

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Wrap Up and Next Steps

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Adjourn - Next meeting

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